

WHAT IS CLAIMED IS:

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1. An apparatus for x-ray treatment comprising:  
a visible light source which emits a beam of visible light;  
5 an optical system capable of directing said beam selectably onto different points on a target plane; and  
a control unit for controlling said optical system to direct said beam of visible light to reach specified points on said target plane according to a specified  
10 program.

2. The apparatus of claim 1 wherein said visible light is green laser light.

3. The apparatus of claim 1 wherein said optical system includes a first rotatable mirror and a second rotatable mirror arranged such that said beam of visible light emitted from said light source is reflected by  
15 said first rotatable mirror to reach said second rotatable mirror so as to be reflected by said second rotatable mirror and to reach said target plane.

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20 4. The apparatus of claim 1 further comprising:  
an x-ray source capable of emitting an x-ray beam to said target plane; and  
a transparent mirror disposed between said x-ray source and said target plane, said beam of visible light  
25 from said optical system being reflected by said transparent mirror, said x-ray source and said visible light source being at equivalent positions with respect to said transparent mirror.

5. An x-ray treatment method comprising the steps of:

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determining a target region to be treated by radiation inside a patient's body;

defining a line relative to said target region;

5 causing a visible light beam to be emitted from a light source and to pass through an optical system; and

controlling said optical system to cause said visible light beam, which has passed through said optical system, to trace said defined line.

10 6. The method of claim 5 wherein said line is defined to simulate said target region.

7. The method of claim 5 wherein said visible light beam comprises green laser light.

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15 8. The method of claim 6 wherein said target region is determined by irradiating said patient's body with an x-ray beam emitted from an x-ray source.

9. The method of claim 6 wherein said patient's body is irradiated through a transparent mirror, said visible light beam, which has passed through said optical system, is reflected by said transparent mirror to reach said line, and said x-ray source and said light source being at equivalent positions with respect to said transparent mirror.

25 10. The method of claim 5 wherein said optical system includes a first rotatable mirror and a second rotatable mirror arranged such that said visible light beam emitted from said light source is reflected by said first rotatable mirror to reach said second rotatable mirror so as to be reflected by said second rotatable mirror and to reach said line.